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The purpose of this study was to develop a formula for the prediction of honor point averages for use in freshman guidance; to determine how consistently the regression equation predicts first-quarter grade point averages as compared with grades made in three quarters; to determine if a relationship exists between certain background factors of the student and his grade point average; and, on the basis of findings, to make recommendations to improve the guidance services at the Alabama Agricultural and Mechanical College. Offers nine general recommendations.						
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FACTORS ASSOCIATED WITH ACADEMIC SUCCESS OF
FRESHMAN STUDENTS AT A SOUTHERN AGRICULTURAL
AND MECHANICAL COLLEGE

- Leon William Bonner
Alabama Agricultural and Mechanical College

Purpose of the Study

1. To develop a formula for the prediction of honor point averages that counselors may use in the guidance of freshman students at the Alabama Agricultural and Mechanical College.
2. To determine how consistently the regression equation predicts first-quarter grade point averages as compared with grades made in three quarters.
3. To determine if a relationship exists between certain background factors of student and his grade point average.
4. To make recommendations, on the basis of these findings, that will improve the guidance services at the Alabama Agricultural and Mechanical College.

The entrance test data, background and adjustment factors included as variables, tested against the criterion of grade point average, were the following: (1) mental maturity, (2) mathematics, (3) English, (4) reading, (5) high school rank, (6) parental education, (7) parental occupation, (8) size of high school, (9) accreditation of high school, (10) total study hours per week, (11) popularity of students, and (12) extra-curricular activities participation.

Method of Research

The sample consisted of 260 freshman students. Data on entrance test scores were obtained from the office of the Director of Student Personnel. High school rank and size of high school were acquired from principals of high schools. Grade point averages were gathered from the Registrar's office.

The statistical techniques employed were measures of central tendency, of variability, product-moment correlation as a measure of relationship, and F values as a measure of significant differences.

Summary and Recommendations

The study did not show a significant relationship between occupation of students' parents, scholastic attainment of students' parents, accreditation of high schools from which the students were graduated, size of high school, popularity of student as a possible roommate choice, and grade point averages.

The number of hours engaged in study, high school rank, entrance test scores including the California Test of Mental Maturity, California Mathematics Test, the New Purdue Placement Test in English, and the Iowa Silent Reading Test were related to grade point averages.

Four independent variables -- high school rank, mathematics, English, and reading -- were chosen for the regression equation. These tests were tried out on another group to get an independent verification. The correlations were significant. They gave additional proof of the validity of using the four selected tests.

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The regression equation developed was:

$$Y = -1.059 + .248X_2 + .004X_3 + .005X_4 + .005X_5.$$

The standard error of estimate of grade point average was .41.

General Recommendations

General recommendations which may be made include:

1. Tests administered to entering freshmen should include the New Purdue Placement Test in English, the Iowa Silent Reading Test, and the California Mathematics Test. These will be useful not only as tests of particular abilities of students for placement in courses, but also as predictors of general academic success.
2. A special effort should be made to secure from principals the high school rank of each entering freshman student.
3. The regression equation derived in this study from first quarter grade point averages and rank in high school, mathematics, reading, and English abilities should be used for the prediction of scholastic achievement.
4. A special effort should be made to get advisors to understand the proper interpretations and how to use them in advising individual students.
5. The first quarter averages were good predictors of scholastic work for the entire freshman year, and advisors should take this in account in their counseling work.
6. A study should be made to determine the amount of mathematics taught and teacher qualification to teach mathematics in smaller high schools. This study revealed a high positive correlation between mathematics scores and the size of high school enrollment.
7. Further research should be done to predict success by each of the several curricula divisions. Since students in this institution do not major in special subjects until their junior year, an effort should be made to predict success in special areas.
8. A more thorough study should be made of student withdrawals as the findings revealed a need for further information on students leaving college.
9. A valuable outgrowth of this study would be to formulate case studies on college students and to include such data as the amount of time the student spends in social activities and in study. The observations should be made and recorded over an extended period of time. This should have good possibilities for learning more about student adjustment in college and provide a basis for counseling.

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